Dubbing Production-Bred Single-Comb White Leghorns

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DUBBING PRODUCTION-BRED SINGLE-COMB WHITE LEGHORNS

WHY IT IS DESIRABLE TO DUB

CLIMATIC CONDITIONS in Hawaii are favorable to the growth of large combs on both male and female production-bred single-comb White Leghorns. In certain strains of White Leghorns, this tendency toward large combs is more pronounced than in others; however, it is those strains that produce birds with large combs and wattles that have given a satisfactory income.

In many cases the combs are so large that they lop to one side and obstruct the vision of one eye (fig. 1). Lopped combs make mating difficult for breeding males; hence, a low fertility results when such breeders are used. This reduction in fertility necessitates

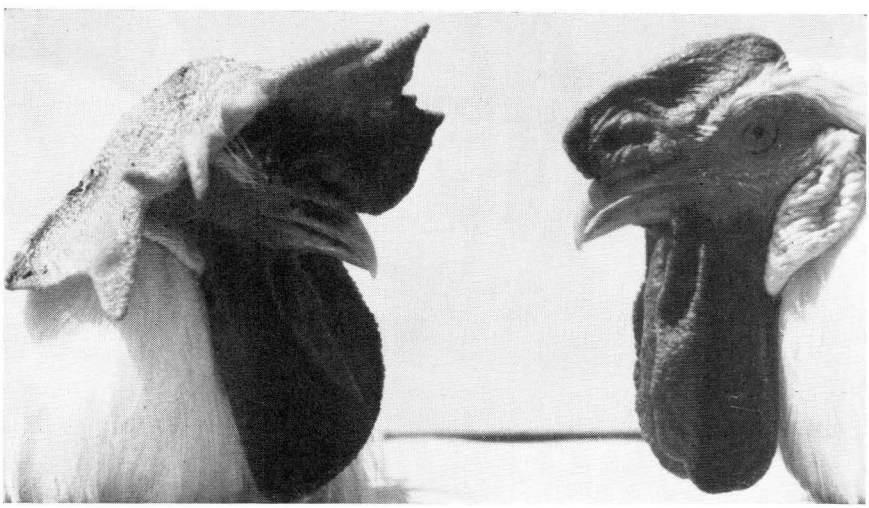

Fig. 1.—Head of the same cockerel before and after operation. Note that lopped comb blocks the vision of one eye. Comb dubbed at 8 months.

the incubating of a greater number of eggs than would otherwise be required. Extremely large combs, whether upright or lopped, have a tendency to affect the vigor of the breeding male. Reduced vigor has a marked effect upon fertility and consequently upon the number of chicks hatched from the original number of eggs placed in the incubator. Large combs are often injured when fighting occurs among males in the breeding pen. In many cases these injuries become infected. As a result, the males become inactive and a subsequent lowering in fertility follows. This circular presents the results of studies which show that removal of combs and wattles from production-bred single-comb White Leghorns is neither bodily injurious nor detrimental to growth, egg production, egg size, or fertility.

HOW TO REMOVE THE COMBS AND WATTLES

Dubbing of the Combs. The method and the kind of instrument used to remove the comb depends upon the age of the bird to be operated. To remove the combs of day-old chicks, small curved scissors such as used to cut finger nails are most efficient. If these are not available, small straight-bladed scissors may be used. The operation is done immediately after the chicks have been removed from the incubator. With the chick held firmly in the one hand and the scissors in the other, the comb is cut away as close to the top of the head as possible. During this operation no blood will flow, nor will the chick struggle. It is necessary to cut close to the head in order to avoid excessive comb growth after the operation. The

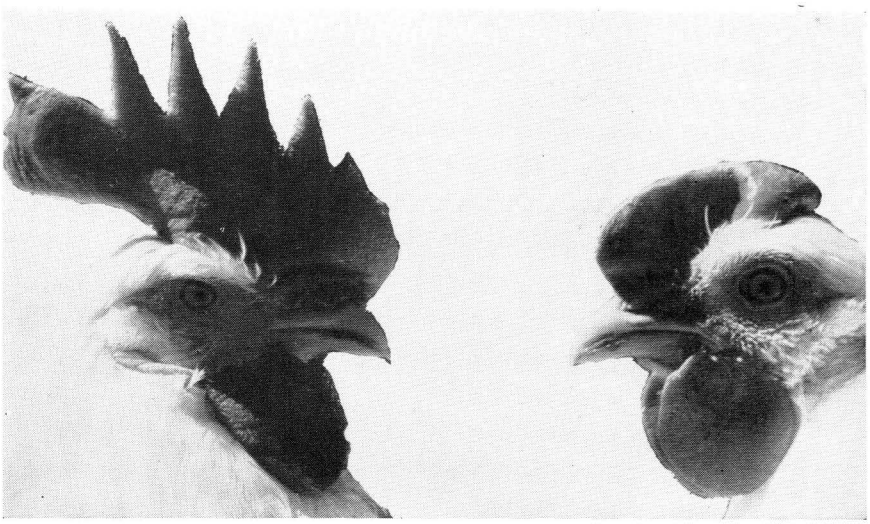

Fig. 2.—Heads of cockerels at 6 months. Cockerel on the right had his comb removed at 1 day of age. Note neat appearance and small size of comb.

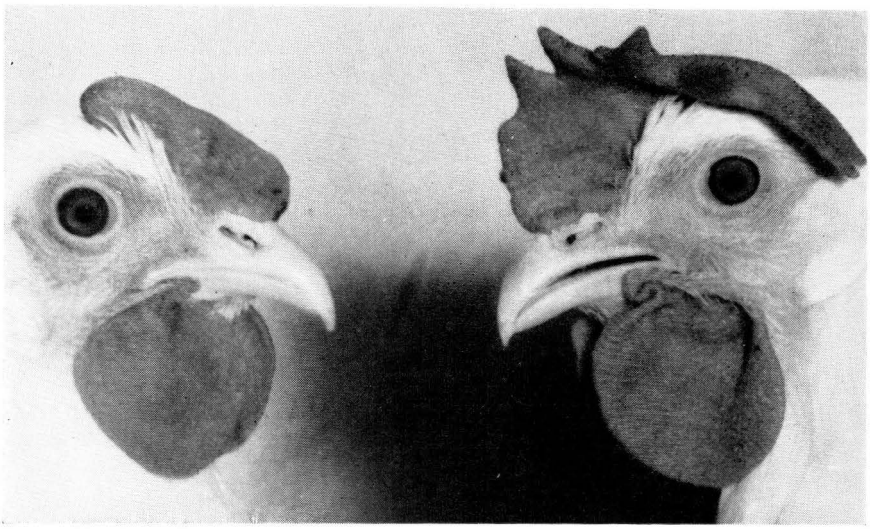

Fig. 3.—Pullet heads at 5 months. The pullet on the left had her comb cut at 1 day of age. Note small size and neat cut.

male with the cut comb to the right in figure 2 shows the results of cutting the comb close to the head, whereas the male to the left in figure 4 shows what happened when not enough of the comb was removed at 1 day of age. Figure 3 shows the head of a pullet at 6 months whose comb was cut at 1 day of age. The head shows the right amount of comb growth and indicates that the cut was made close to the head.

In the third week and thereafter, sharp scissors, a knife, or razor blade can be used to remove the comb. The amount of comb to remove and the place on the comb to make the cut is shown by the broken line on the comb of the males in figure 4. Two persons can perform the operation in less time and with greater success than one person. One person should hold the bird securely so that the bird will not struggle during the operation. The other person should perform the operation in the following manner. Grasp the head of the male with one hand and with the scissors held in the other begin the cut at the rear of the comb and work toward the front. The comb should not be cut too close to the skull; instead, a line near the middle of the comb, as shown in figure 4, should be followed. The care of the bird after the operation is discussed under the heading "How To Care for Males After the Operation."

Removal of the Wattles. The removal of the wattles in males is easily done at 3 to 6 weeks of age. After this period the operation is made more difficult because of the size of the wattles and also because of the location of attachment on the throat. Two people can perform the operation in less time and with greater success than one person. One person should hold the bird firmly so that no

struggling occurs. The other person grasps a single wattle in the one hand and with sharp scissors removes the wattle by cutting as near to the skin of the throat as possible. When one wattle has been removed, the other is cut away in the same manner as the first. This procedure applies only to young males.

In removing the wattles from adult birds, a sharp knife is preferred to scissors. One person should hold the bird while the other performs the operation. The operator grasps a wattle with one hand and with the knife in the other makes a cut on one side of the wattle where it is attached to the skin of the throat. Care should be exercised to avoid a deep incision. When one side has been cut, an incision is then made on the other side. The wattle will then be severed from the skin of the throat and is ready to be removed. The other wattle is cut away in the same manner as the first. If a pair of scissors is used, the wattle can be removed by making one cut near the skin of the throat. When this cut is used, it does not matter if the operator allows a small portion of the wattle to remain. For those not skilled in the use of the knife, the scissors method will be found to be satisfactory.

COMBS CAN BE DUBBED AT ANY AGE

During the past several years the practice of removing the combs of males at 6 months of age has been rather general. Recent

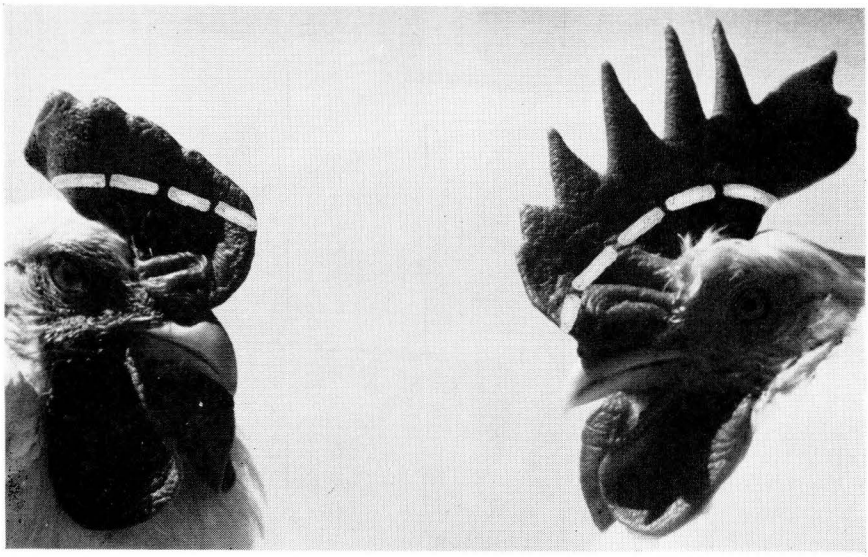

Fig. 4.—Heads of cockerels at 6 months of age. Cockerel on the left had his comb cut at 1 day of age. Comb growth is large because cut was not made close to head. Broken lines show where to make cut when dubbing cockerels at 6 months. Note that position of cut is not the same on both combs.

studies at the Hawaii Agricultural Experiment Station show that combs can be removed satisfactorily at 1 day of age and any time thereafter. When combs were removed from day-old males and females, no loss of blood occurred during or after the operation. Many people hesitate to remove the combs of adult males because of the loss of blood and because also of their dislike of smearing blood on their hands or clothing. To these people the removal of the comb at 1 day of age is highly recommended. In figures 1 to 5 are shown the heads of birds with combs cut at various ages, indicating that the time of the removal depends upon the operator and not upon the age of the bird.

CUT THE WATTLES OF MALE CHICKS AT THREE WEEKS

Wattles on day-old baby chicks are too small to be removed. It is therefore necessary to wait until the third week, by which time sufficient growth for a successful operation has taken place. A male whose wattles were removed at 3 weeks of age is shown in figure 5. Less growth resulted on 6-week old birds, as the wattles are much larger at this time and easier to remove than at 3 weeks. In wattles cut at 3 weeks very little blood was lost, while those cut at 6 weeks bled in greater amounts and took twice as long to heal. The male appearing on the cover had his wattles cut at 6 months of age. At the time of the operation the wattles were practically full grown. This permitted the operator to cut close to the skin on the throat to which the wattles were attached, and therefore very little growth resulted after the operation. At 6 months, more blood is usually lost than at an earlier date; hence, greater precaution must be taken than during the earlier periods. The proper age at which to remove the wattles from male chickens is that period in which the operator secures the best results.

HOW TO CARE FOR MALES AFTER THE OPERATION

After the operation the males should be observed closely to see that they do not bleed to death. If the operation is performed during the morning hours, profuse bleeding of males will seldom occur. However, should certain individuals bleed too freely, a red hot searing iron rubbed over the incision will cause the blood to coagulate. If a few soft feathers from the under side of the wing are placed on the cut, the blood will cease flowing. Iron subsulphate or iron chloride sprinkled on the wound are effective in stopping bleeding. The incision heals well in 2 to 3 weeks. If fighting occurs during this period, injury to the cut can be greatly reduced by the use of mechanical guards. No extra care in feeding or other management practices is necessary.

DUBBING THE COMB AND WATTLES DOES NOT AFFECT BODY WEIGHT AND SEXUAL MATURITY

Data obtained from experiments in which the effects of the removal of the comb on body weight and sexual maturity were

observed indicated that pullets whose combs were removed at 1 day of age averaged 4.25 pounds at 6 months, whereas those not cut averaged 4.15 pounds at 6 months. These two lots of pullets were placed together in the laying house, and records were kept of the date that the first egg was laid in order to determine the period of sexual maturity. Pullets whose combs were cut at 1 day of age laid their first egg after an average of 176.50 days and those whose combs were not cut laid their first egg at an average of 173.08 days. These slight differences in body weight and in the number of days at which the first egg was laid show that the removal of the comb did not have a detrimental effect upon body weight and sexual maturity.

Fig. 5.—This cockerel had his comb cut at 6 months of age and his wattles at 3 weeks. The picture was taken at 8 months.

Males whose combs were cut at 1 day of age averaged 6 pounds at 10 months; those whose combs were not cut averaged 5.75 pounds. Males whose combs were cut at 1 day of age and whose wattles were cut at 3 weeks averaged 5.75 pounds at 10 months. Those males whose combs and wattles were cut at 6 weeks averaged 6 pounds at 10 months, and those whose combs and wattles were cut at 6 months averaged 6 pounds at 10 months. These figures show that the removal of the comb and wattles or of the comb alone did not affect the growth of breeding males.

REMOVAL OF THE COMB OF PULLETS DOES NOT LOWER EGG PRODUCTION OR EGG SIZE

In a test at the Hawaii Agricultural Experiment Station, which extended over a period of 6 months, pullets whose combs were cut at 1 day of age laid 93.42 eggs. Those whose combs were not cut laid 95.42 eggs. The average weight per dozen of eggs from the cut-comb pullets was 22.44 ounces; that from the non-cut group was 22.5 ounces. This slight difference in favor of the non-cut combs does not indicate, however, that the cutting of the combs was detrimental to egg production or egg size, as comparison of

the egg production of two other groups of pullets, all with uncut combs, showed a variation of twelve eggs per bird. This indicates that a commercial egg producer may cut the combs of pullet chicks at 1 day of age without lowering the average annual egg production.

LARGE, LOPPED COMBS IN MALES LOWER VIGOR AND FERTILITY

Studies at the Hawaii Agricultural Experiment Station show that males with dubbed combs are more vigorous and consume greater quantities of feed than those whose combs are lopped and not cut (see fig. 1). Dubbed males have clear vision in both eyes, whereas males with lopped combs that have not been dubbed are often blind in the eye covered by the lopped comb. The ability of breeding males to see normally through both eyes results in successful matings, and consequently increases the number of eggs fertilized. Experiments at this station have further shown that old, inactive males whose combs were lopped or not lopped have increased breeding ability when their combs are removed. Many males have shown an increase of 25 to 40 percent in the number of fertile eggs produced by hens mated to them. This is of considerable importance in using the progeny test program, as it enables a breeder to realize a greater number of chicks from a proven sire.